

"Dedicated to Public Service"

# THE RADIATOR



W6RHC  
IRL #8170  
Echolink #322788



<http://www.gearsw6rhc.org>

P.O.Box 508 Chico, CA 95927-0508

Founded: August 13 1939

75 YEARS

October, 2014

## Coming Events

### O.A.R.S. GENERAL MEETING

Second Friday, every month, at 7:00 p.m., at St. Paul's Church Parrish Hall, 1430 Pine St., Oroville

G.A.R.S. Second Wednesday, each month, General Meeting, Lutheran Church Hall, Artois; 7:00

G.E.A.R.S General Meeting, third Friday each month, at Butte County Search and Rescue Building, Chico. Doors open at 6:30 p.m.

Butte A.R.E.S. MEET: fourth Friday, monthly, at Butte County Search and Rescue Building.

### FCC EXAMS - GEARS VEC

First Sunday of every even numbered month. At the Butte County Search and Rescue Building. Written test at 2:00 p.m. For information or pre-registration call Tom Rider-W6JS, (530) 893-9211.

### Club Events:

News and items of interest  
GEARS Calendar...all inside.

Website: [www.gearsw6rhc.org](http://www.gearsw6rhc.org)

the incom-  
while he  
roof.  
need to re-  
to make  
antenna



Picture courtesy EVARC

ing co-ax  
was on the  
Seems I  
place some  
that  
better.

## The Prez' Says:

It is officially FALL and we have had a decent rain. That washed the dust and pollen off the overhead antenna components, but wasn't enough to soak down the ground rod locations. If you can sneak a little water from the lawn and shrubs, put it to good use on your groundrod array until we have soaking rains. Your propagation will thank you.



If you have always aspired to office, Gene Wright WA6ZRT is the man in charge of the nominating committee this year.

If you'd like to sit up front at the meetings or serve on the Board of Directors, call him at 345-3515 and have your name added to the list.

I understand it was a good steak bake in Oroville this year, but not as big a turnout as expected. I had to stay home to help finish the patch job on a leaky roof. Ran out of \$\$\$ before we ran out of cracks in the roof. That will be remedied this next month, unless I sell off some excess supplies. It is fortunate that my "handy man" is also a ham since he took the time to inspect some (go to pg.7)

## **OCTOBER 18, ANNUAL JOTA SCOUT EVENT**

"Tim Wells again, trying to get the word out of the up coming JOTA. Again this is a world wide scouting (Boy Scouts, Girl Scouts, or any youth) event. The main thrust is for youth to talk to youth.

I am still looking for operators to help either as a relief or control op. This is a field day type of operation, so we need equip. -

If you are interested please contact me @ w6twi@arrrl.net or 872-7427 eve. I will be out of town the 1st week of October. We will be doing this event Oct 18, from 8 to 1400, at the Chico Elks lodge in the back of the lot.

Thanks Tim w6twi"

### **WHEN IS JOTA?**

Jamboree-on-the-Air is held the third weekend in October. The official hours are from Saturday at 00:00 hours local time (right at midnight Friday) to Sunday 24:00 (midnight Sunday evening). So you've got the whole weekend to make JOTA contacts.



## **What is JOTA? (FROM ARRL NEWSLETTER)**

When Scouts want to meet young people from another country, they usually think of attending a World Jamboree. But few people realize that each year more than half a million Scouts and Guides "get together" over the airwaves for the annual Jamboree-on-the-Air (JOTA). The World Scout Bureau reported that the 2010 JOTA had just over 700,000 Scout participants from nearly 6,000 amateur radio stations! Modern technology offers Scouts the exciting opportunity to make friends in other countries without leaving home. JOTA is an annual event in which Boy and Girl Scouts and Guides from all over the world speak to each other by means of Amateur (ham) Radio. Scouting experiences are exchanged and ideas are shared via radio waves. Since 1958 when the first Jamboree-on-the-Air was held, millions of Scouts have met each other through this event. Many contacts made during JOTA have resulted in pen pals and links between Scout troops that have lasted many years. With no restrictions on age or on the number of participants, and at little or no expense, JOTA allows Scouts to contact each other by ham radio. The radio stations are operated by licensed amateur radio operators. Many Scouts and leaders hold licenses and have their own stations, but the majority participate in JOTA through stations operated by local radio clubs and individual radio amateurs. Some operators use television or computer-linked communications.

## OARS STEAK BAKE—BEST STEAKS SUPERB SOCIAL TIME-LOVELY DAY

Sadly, less participation than in previous years. The loss is to those who were not there. Great weather, even greater food, Fabulous steaks, a totally pleasant day.

A huge thank you to all the members of Oroville Amateur Radio Club for the great meal, and great Steak Bake!



## NEWSMAX Magazine

September , 2014 issue, pages 68, 69  
Has published an article "Ham Radio Revival" . It is well worth taking time to read . If you don't know a friend who subscribes to NEWSMAX, check out your local library. Libraries quite often have an extensive and up to date magazine and news-print section.

The author of the article is John Edwards, from Phoenix , a writer, and also a licensed ham radio operator since 1976. His Station call sign is W6JE.



Caps embroidered with your name and your call sign may be ordered by contacting WA6ZRT -Gene Telephone #530 -345-3515

### VEC TESTING

2:00 p.m.

October 5, 2014

December 7, 2014

### AT BUTTE COUNTY SEARCH & RESCUE BUILDING

All Classes  
Technician, General and  
Extra.

Contact: W6JS

Tom Rider

530-893-9211

**MINUTES OF GENERAL MEETING for Sept 19, 2014**

**PROGRAM:** Home-made Buddy Pole by Tom Rider and Gene Wright.

**ATTENDANCE:** All present

**VEC:** None

**TREASURER:**

Balance \$3043.02, Deposits \$481.20, Outflow \$332.04.

**Announcement:**

**MINUTES:** Approved the minutes from August meeting.

**OLD BUSINESS:**

Tri Club Steak Bake in Oroville on the 20th.

**Ecolink & IRLP:** Scott has received the equipment and is assembling it now. Scott sent the micro node to the manufacture to be fixed. He also obtained some coax and a three element 2m yagi. Scott has donated the cost of the antenna and cable to the club.

**NEW BUISNESS:**

**Nominating committee** for officers to be established for next year.

**ADJOURNMENT:** 20:36 hr.

Dale Anderson,  
Secretary

**Board of Directors Meeting: Sept 19, 2014**

**ATTENDANCE:** All present

**OLD BUSINESS:**

Liability insurance has been paid.

**NEW BUSINESS:**

**NARCC .** Have obtained the password and will change it to something more re-memorable.

**JOTA.** Anna will contact Tim.

**MEMBERSHIP APPLICATIONS:**

Three new members Rich (KK6OWY) and Rebecca(KK6OWX) Reiner , Andy Burner (KK6NQW).

**ADJOURNMENT:** 21:16 hr.

Dale Anderson,  
Secretary





**WHAT A GREAT WAY TO PUBLICIZE AMATEUR RADIO! ARE ANY OF OUR AMATEUR CLUBS INTERESTED IN POOLING FUNDS TO DO SO? THIS IS A DIFFERENT CONCEPT FROM OUR STANDARD APPROACH TO GAINING PUBLICITY AND NOTORIETY FOR HAM RADIO, AND PERHAPS IT IS ABOUT TIME WE CONSIDER AN ADDITION TO OUR PARADIGM- THINK OUTSIDE THE BOX!**

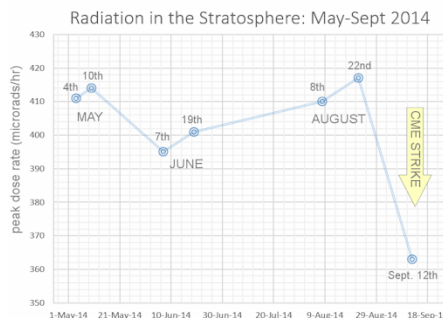
### **STUDENTS MEASURE 'FORBUSH DECREASE': ([spaceweather.com](http://spaceweather.com))**

On Sept. 12th, a CME hit Earth's magnetic field, igniting the most intense geomagnetic storm of the year. The students of [Earth to Sky Calculus](#) quickly launched a helium balloon to the stratosphere to see what effect the storm was having on Earth's upper atmosphere. They expected to measure more radiation than usual. Instead, they measured less. This plot shows a sharp drop in high-energy radiation on Sept. 12th compared to previous flights in May, June, and August:

What caused this counterintuitive drop? Answer: When the CME swept past Earth, it swept aside many of the cosmic rays that normally surround our planet. The effect is called a "Forbush Decrease," named after physicist [Scott E. Forbush](#) who first described it in the 20th century. (graphic below)

Wherever CMEs go, cosmic rays are deflected by magnetic fields inside the CME. Forbush decreases have been observed on Earth and in Earth orbit onboard Mir and the ISS. The Pioneer 10 and 11 and Voyager 1 and 2 spacecraft have experienced them, too, beyond the orbit of Neptune. Now [high school students](#) have detected a Forbush Decrease in the stratosphere using little more than an insulated lunchbox and a helium balloon.

The balloon's lunchbox-payload is shown here suspended more than 100,000 feet above the Sierras of central California:



Inside the payload, there was an ionizing radiation sensor (energy range: 10.0 KeV to 20.0 MeV), a cryogenic thermometer, multiple GPS altimeters and trackers, and three cameras. During the 2.5 hour flight, the buoy collected more than 50 gigabytes of video and science data ranging in altitude from 8500 ft to 113,700 ft above sea level. The analysis is still underway.

The students wish to thank [Caisson Biotech LLC](#) for sponsoring this flight. Note their logo on the upper right corner of the payload!

Readers, if you would like to sponsor an upcoming balloon launch and have your logo flown to the edge of space, please [contact Dr. Tony Phillips](#) to make arrangements. The cost of sponsorship is \$500. Sponsors receive a complete video of the flight along with advertising exposure on [spaceweather.co](http://spaceweather.co)

[Earth to Sky](#) is group of high school and middle school students in Bishop, California, mentored by Science@NASA's Dr. Tony Phillips. In addition to [launching balloons](#) to explore the stratosphere, they are also building a small satellite (a CubeSat) to fly through and photograph auroras over Earth's pole. They hope to launch the satellite in late 2012. Find out [more about their projects from Science@NASA](#).

## Twitter: another tool in the ham radio toolbox

By Dan Romanchik, KB6NU

It all starts innocently enough. You get a computer to do your logging, and before you know it, you're working digital modes. Then, you snake an Ethernet cable down to the shack or connect to your wireless router. Pretty soon, you can't do without having a browser window open to one of the DX clusters or Reverse-Beacon.Net or QRZ.Com or all three simultaneously.

Well, now's there another Internet service that I can't do without down in the shack: Twitter! I get on Twitter all the time now when I'm in the shack, and I love it. It's truly enhanced my amateur radio experience.

One of the ways it's done this is by bringing me all kinds of interesting technical information. I not only follow @hackaday and @DIYEngineering, and @EDN.Com, but a bunch of hams who are doing fun things. I hate to list some, for fear of leaving some out, but I will give a shout out to @NT7S, @AA7EE, @mightyohm, @caulktel, @LA3ZA. There's even @HiramPMaxim (the P stands for "parody"). If you go to my blog at KB6NU.Com and search for "From my Twitter feed," you'll find links to some of the most interesting Tweets that have found their way to me.

I'm also following a couple of amateur radio retailers. Today, for example, @DXEngineering is offering \$55 off the RigExpert AA-54 Antenna Analyzer.

I also use it to get information about weather conditions and band conditions. For example, I follow @edvielmetti, who is KD8OQG. He's always tweeting about local severe weather. A Tweet from him gets me to turn on my 2m radio to monitor the local SkyWarn net.

As far as band conditions go, I throw out a Tweet, asking about band conditions, and in seconds, I'll get reports from my followers here in the U.S. and around the world. I try to do my part as well. When I fire up the rig, I'll Tweet out a report of how the bands seem to me.

While all of this is great, it's really all about the people. I currently have more 2,200 followers and I follow more than 900. I would never have met some of these hams if it wasn't for Twitter, and I have since worked several of them on the air after first meeting them on Twitter. Last May, we had a "Tweetup" at the Dayton Hamvention. There were at least 20 of us there. How cool is that?

Twitter isn't for everyone, but I'd encourage you to give it a try. I'm having a lot of fun on Twitter, and I think you will, too. If you do set up a Twitter account, please follow me, @kb6nu. If you mention that you read this column, I'll be sure to follow you back.

=====

When not Tweeting about his latest amateur radio exploits, you'll find KB6NU working 30m CW or teaching ham radio classes. If Twitter isn't your thing, you can still follow him by reading his blog at [www.kb6nu.com](http://www.kb6nu.com).

## **APPLICATIONS FOR ARRL 2015 SCHOLARSHIPS OPEN ON OCTOBER 1, 2014**

Seventy Nine scholarships for a total of \$107,250 were awarded for the 2014 scholarship program!

Applications for the 2015 ARRL Foundation scholarship program will be accepted between midnight, October 1, 2014 and 11:59PM Eastern Standard Time January 31, 2015. Transcripts must be received by February 13, 2015.

More than 80 scholarships ranging from \$500 to \$5,000 are awarded through the ARRL Foundation Scholarship program. In addition, one applicant is selected for the prestigious William R. Goldfarb Memorial Scholarship, awarded to a high school senior pursuing a degree in business, computers, medical, nursing, engineering or science.

**How to establish an ARRL Foundation Scholarship:**

Individuals, groups or clubs wishing to establish an ARRL Foundation Scholarship should go to to the [Sample Terms of Reference](#). If more information is needed, contact the ARRL Foundation by email at [foundation@arrl.org](mailto:foundation@arrl.org) or call Lauren Clarke, KB1YDD, at 860-594-0348.

( excerpted from: [arrl.org/scholarship-program](http://arrl.org/scholarship-program) website)

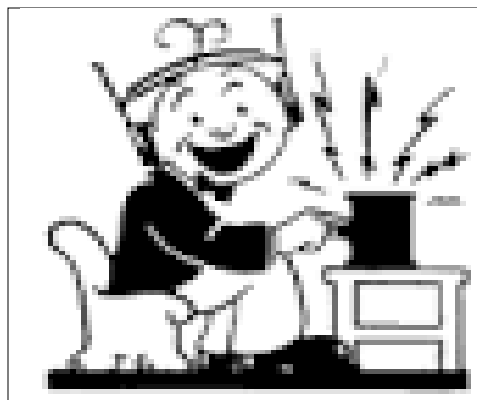
## **PREZ SAYS (continued)**

of the incoming co-ax while he was on the roof. Seems I need to replace some to make that antenna better.

Short letter this month, but I have saved the best for last. Chuck Aldrin had neck/back surgery on Tuesday morning. He was really tense about the procedure since it could go wrong very easily. When I spoke with his XYL last night, she said that he was already making sense after all the anesthetics he got for a much longer surgery than expected. Seems the doctors are happy with the way it went, Chuck will get to go home in about a week and should be back on the radio soon.

Until I need to send a Special Bulletin or the next meeting---Good propagation to you.

**Anna KG6ZOA**



## **ARES TRAINING FOR EMERGENCIES**

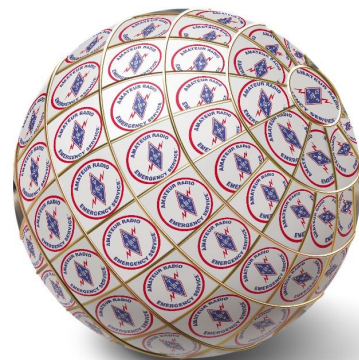
**ARES is a serious program requiring dedicated commitment from participating hams. The below information is from Butte-ARES Website.**

**In today's ARES® organization individual training and certification has become increasingly important in order for amateur operators to be able to verify their skills and abilities. This need increases daily as local emergency management organizations, hospitals, and other served agencies strive to meet the training and training verification requirements imposed upon them as a result of the post Hurricane Katrina and 9/11 Disasters.**

**The U.S. Federal government has adopted a new disaster response plan. This plan calls for all disaster responders at all levels to have basic knowledge and understanding of the disaster management and their role in the process. All states and local governments are required to adopt the basic principles of the National Incident Management System (NIMS) and ensure that their responders, both professional and volunteer are trained in these in these basics.**

**In order to assist you, as an ARES responder, to meet these basic training needs, we have included links below to both free Federal Emergency Management Agency (FEMA) online courses and the ARRL online Emergency Communications Courses. We have included other optional courses that would be of benefit to you in responding to an emergency or disaster situation.**

**[ARRL & FEMA Training](#)  
**[Other Training Resources](#)****





## **Tube of the Month**

### **TYPE “U” Pliotron**

Early vacuum tubes were often given names and not numbers. In 1913 the General Electric Company decided to give names to reflect the characteristics of the different types of tubes they were experimenting with. I guess it was fashionable to use Greek or Latin names, as was the practice when naming new species. Pliotron was chosen for the triode tubes. Pleion in Greek is “more” and tron is an instrument. A pliotron gives you more or it amplifies. GE produced many tubes during World War I for the military. Commercial use of transmitting tubes essentially didn’t exist. Near the end of the war, more powerful tubes were being made. A 50-watt version was especially useful and designated the “U” Pliotron. It used a special bayonet socket. Today this size and shape of tube and the socket are still called “50 Watter”. Insulation between the four pins was made of mica and very weak.

About 1200 of these tubes was made for the Navy who gave it the designation CG-1144 and 200 for the Army who called it a VT-18. The Navy used these tubes in their seaplane transmitters. This tube was a natural for commercial and amateur radio equipment, so after the war ended, GE came out with an improved tube designated the UV203 and was a big hit with hams who could afford it. For the next 30 years the 50 watter was modified and improved. The construction of the 203 limited its upper frequency, but this shape of tube is still very popular in audio as in the 211 and 845 types.

Visit the museum at [N6JV.com](http://N6JV.com)  
Norm N6JV



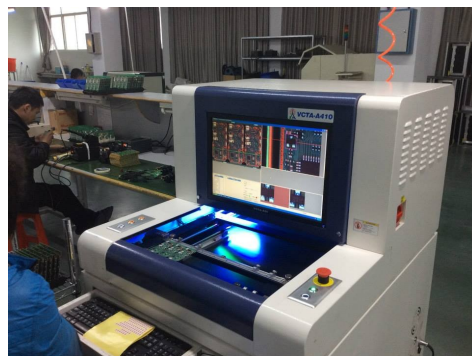
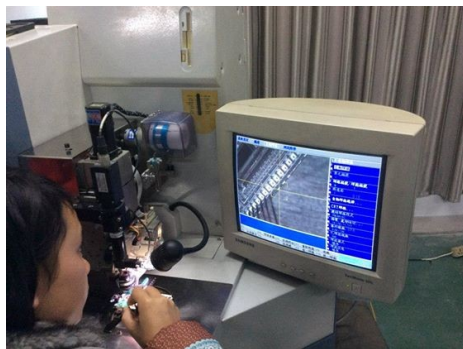
Contributed by KE6VUS-Scott Petersen

This story was from a reseller blogger, nameless, sorry, but Baofeng has the same pics on their web page, that is where it came from. <http://nananbaofeng.manufacturer.globalsources.com/si/6008811719544/FactoryTour.htm>

### Baofeng factory 2014 trip

Hundreds-and-thousands of Ham radio operators are using BaoFeng radios such as the UV-5r, 888s, Gt-3, UV-82, and etc, but very few people know the process of how Baofeng radios are manufactured and tested. In January we had the privilege to visit their facilities in several provinces across mainland China. Our first stop in 2014 was Baofeng's factory in Fujian China. This trip was aimed at the deep cooperation and partnership between Baofeng and Radioddity. As the largest authorized distributor of Baofeng radios, we buy products at wholesale prices directly from the Baofeng factory. We will then transfer them to our Warehouse in southern China then directly to your doorstep in as little as 3 days. How else did you think we were able to offer such low prices?

The following photos display how Baofeng radios are designed, manufactured, tested, and packaged.



This article is in no way an endorsement of Baofeng radios. I hear & read a lot of comments about the product, some very positive, many disparaging! One fellow (anonymous) recently wrote: "One problem I noticed is people using (it) as a scanner -no ham license- and keying up on police or fire , causing problems. My advice is do a split step in programming with the ex as your desired channel to hear them tx -+ as MURS 1. It will prevent accidental keying on police or fire. If a key up happens it'll go to MURS 1. This issue has been used lately as reason police and fire need to spend millions on trunked 700 and encryption because of people keying up easily on police or fire." So, if you are thinking of this model radio, do a lot of research first. Maybe in the long run, a more well known brand radio is the best choice especially for new Hams, who often look at price rather than high end quality?

**The GEARS Newsletter Staff:****Editor and Publisher**.....Dorothy Post**Printing & Distribution for snail mail:** Evelyn Weir**Website**...Stephen McDermott W6AKF

The Radiator is a monthly publication of the Golden Empire Amateur Radio Society (GEARS). It is the policy of the Editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio, of interest to GEARS members, and space is available. **Please send all submissions to the Editor – Dorothy Post by the last day of the month through the following medium: E-mail: [dj@posthouse.us](mailto:dj@posthouse.us)**

**Club Officers: (Board of Directors)**

President .....Anna Horn –KG6ZOA

Vice President..... Scott Petersen-KE6VUS

Secretary .....Dale Anderson-KK6EVX

Treasurer.....Lester Mikeworth KG6KUO

Past President .....Gene Wright-WA6ZRT

Director..... Tom Rider-W6JS

Director.....Stephen McDermott W6AKF

Director.....Stephen Wolske-KF6HSS

**Club Meetings****General Meeting Third Friday 6:30 PM****Board Meeting Third Friday 9:00 PM****GEARS Club Net****Tuesdays 8:00 PM 146.850 MHz-PL 110.9****GARS Club Net: Monday, 19:30 147.105+Mhz PL 110.0****Sacramento Valley Traffic Net****Nightly 9:00 PM 146.850 MHz-PL 110.9****ARES Nets:****Butte Mondays 20:00 145.280 MHz-PL 110.9****Yuba Sutter Thursdays 19:00 146.085+MHz PL 127.3****Glenn Thursday 19:30 147.105 MHz +PL 100.0****Other Nets:****Sac Valley Section Net—7:00 PM 2nd Wed of the month 146.085 MHz+PL 127.3****440 Wed. Night 8:00 PM Wednesday 440.650 MHz****Golden Bear 7:00 PM Daily 3975 kHz****Willie Net 8:00 PM Mondays 1930 kHz****Western Public Service System (WPSS)**

Winter 5:00 – 7:30 PM 3952 kHz

Summer 6:00 – 8:30 PM 3952 kHz

**ARISS (International Space Station) Uplink 144.490 MHz Downlink 145.800 MHz****Hope-1 satellite: all uplinks are in 145Mhz band:****All downlinks are in 435Mhz band****...California Traffic Net: 3906 KHz nightly @6:00 pm****For traffic listing & @6:30 p.m. for roll call.**

## World Genesis Amateur Radio Educational Video

**On Thursday, December 5, 2013 12:48 AM, World Genesis Foundation <[jumpstart24@worldgenesis.org](mailto:jumpstart24@worldgenesis.org)> wrote:**

**"I hope you might help us to share the news about a new educational video about Amateur Radio. It is free to view and share and can be found here:**

**<http://youtu.be/ivUMIADFSDw>**

**It has been created for anyone who wishes to encourage youth and adults to explore the world of Ham Radio and it also can be found on the home page of the project website at [www.RadioQRV.com](http://www.RadioQRV.com).**

**Thank you for your consideration.  
73, Mike"**

World Genesis Foundation



[www.WorldGenesis.org](http://www.WorldGenesis.org)

**(This video is an excellent production! I urge you all to take time to watch it and pass it on! Editor)**

<b>Sunday, October 5, 2014 December 7, 2014</b>	<b>2:00 p.m.</b>	<b>VEC—Exams</b>	<b>Butte Co. Search &amp; Rescue Building 2591 Morrow Lane, Chico</b>	<b>Tom Rider-W6JS 530 893-9211</b>
<b>Wednesday October 1, 2014</b>	<b>7:00 p.m.</b>	<b>GARS-Glenn Glenn Amateur Radio Society General Meeting, &amp; Amateur Radio Emergency Services</b>	<b>Lutheran Church Hall: 565 Main Street Artois</b>	<b>Albert Leyva- N6YCK 530-567-5979</b>
<b>Friday, October 10, 2014</b>	<b>7:00 p.m.</b>	<b>OARS Oroville Amateur Radio Society General Meeting</b>	<b>St Paul's Church Parrish Hall 1430 Pine Street Oroville</b>	<b>John Hunt 530 589 4734</b>
<b>Friday October 17, 2014</b>	<b>7:00 p.m.</b>	<b>GEARS Golden Empire Amateur Radio Society General Meeting</b>	<b>Butte County Search and Rescue Building 2591 Morrow Lane Chico</b>	<b>Anna Horn -kg6zoa 530-877-5939</b>
<b>Friday October 24, 2014</b>	<b>7:00 p.m.</b>	<b>Butte Co .ARES</b>	<b>Butte County Search &amp; Rescue Building 2591 Morrow Lane Chico, CA</b>	<b>Scott Petersen KE6VUS 530-876-1526</b>

The next celestial event of note: October 8 th, a Blood Moon...

